## **IN THE CLAIMS:**

Claim 1 (Currently amended): A process for the preparation of aerogels comprising, including

- a) the exchange of exchanging the liquid phase of the an aquagel with xenon; and
- b) the extraction of extracting xenon from the xenon exchanged aquagel of step a); and
  - c) optionally, recovering xenon from step b) the possible recovery thereof.

Claim 2 (Currently amended): A process for the preparation of aerogels according to claim 1, including a previous phase of further comprising, prior to step a), forming an aquagel from a suitable precursor under conditions suitable for hydrolysis/condensation

Claim 3 (Currently amended): A process for the preparation of aerogels according to claim 2, wherein the <u>suitable precursor is hydrolysis/condensation reaction is carried out starting</u>

from an alkoxyde precursor of having the formula:

 $X-Me(OR)_{n-1}$ 

in which Me is a metal belonging to the 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> Groups of the Element Periodic Table System; n is integer and represents the valence of Me; X is either -OR or -R where-OR is an alkoxyde group and -R is an organic radical, linear or branched, with having a number of carbon atoms up to 10 carbon atoms.

Claim 4 (Currently amended): A process for the preparation of aerogels according to claim 3 wherein where the suitable precursor is preferably tetramethoxysilane [[,]] or tetraethoxysilane.

Claim 5 (Currently amended): A process for the preparation of aerogels according to claim 3 wherein where the hydrolysis is reaction is accomplished in presence of an acid selected among from hydrochloric, nitric or acetic acid.

Claim 6 (Currently amended): A process for the preparation of aerogels comprising including

- a) forming an aquagel from a suitable precursor under suitable conditions for hydrolysis/condensation;
  - b) exchanging the liquid phase of an aquagel with liquid xenon;
  - c) extracting xenon from the aquagel of step b) under supercritical conditions; and
- d) optionally, recovering xenon from step c) the exchange of the aquagel liquid phase with xenon according to claim 1 where such an exchange is accomplished with liquid xenon and the extraction thereof is accomplished under supercritical conditions.

Claim 7 (Currently amended): A process for the preparation of aerogels according to claim 6 wherein the exchange of the liquid in the aquagel is carried with liquefied xenon at temperature between 0 and 16.6°C.

Claim 8 (Currently amended): A process for the preparation of aerogels according to claim 6

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wherein where the hypercritical extraction of xenon from the wet gel is carried super critical conditions include a temperature higher than 16.6°C.

Claim 9 (Currently amended): A process for the preparation of aerogels according to claim 6 wherein where the hypercritical extraction of xenon is carried at super critical conditions include a pressure higher than 58.4 bar.

Claim 10 (Currently amended): A process for the preparation of aerogels including the exchange of the aquegel liquid phase with xenon according to claims 1 and 6 characterized in that it comprises also a xenon recovering xenon phase at the end of the extraction.